## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (original): A method for encoding ATM cells for transmission over a wireless link comprising the steps of:

receiving an ATM cell stream comprised of a plurality of ATM cells;

detecting idle/unassigned cells within said cell stream; assembling a header frame made up of headers of a number of said plurality of ATM cells;

assembling a payload frame made up of payloads of said number of said plurality of ATM cells; and

placing some of the detected idle/unassigned cells in a selected portion of the payload frame.

2. (original): A method according to claim 1 wherein said header frame arranged in an i row x n column matrix.

3. (original): A method according to claim 1 wherein said payload frame is arranged in an j row x m column matrix.

4. (original): A method according to claim 1, wherein said step of assembling said header frame further comprises:

partitioning said header frame comprised of headers of an n number of ATM cells into a first section and a second section;

said first section comprised of n - x number of headers of said n number of ATM cells and an added cell made up of control bytes; and

said second section comprised of x number of headers of said n number of ATM cells.

5. (original): A method according to claim 1, wherein said step of assembling said header frame further comprises:

adding a predetermined number of bytes of Header Error Correction Code (HECC) to said header frame.

6. (previously presented): A method according to claim 5, wherein said Header Error Correction Code is generated using a Reed-Solomon coding scheme.

7. (original): A method according to claim 1, wherein said step of placing idle/unassigned cells further comprises:

adding extra Payload Error correction code in any idle/unassigned cells which are placed in said selected portion of said payload frame.

8. (original): A method according to claim 1, wherein said step of assembling said payload frame further comprises:

adding a predetermined number of bytes of Payload Error Correction Code (PECC) to said payload frame.

9. (original): A method according to claim 8, wherein said Payload Error Correction Code is generated by a Reed-Solomon coding scheme.

10. (original): A method for transmitting ATM cells received from a wireline interface over a wireless link comprising:

receiving an ATM cell stream comprised of a plurality of ATM cells from said wireline interface;

encoding said plurality of ATM cells, wherein said encoding step includes the steps of:

detecting idle/unassigned cells within said cell stream,

assembling a header frame made up of headers of a first predetermined number of said plurality of ATM cells arranged in a first matrix,

assembling a payload frame made up of payloads of said first predetermined number of said plurality of ATM cells arranged in a second matrix, and

placing up to a second predetermined number of the detected idle/unassigned cells to an end of the payload and header frames, starting with a last column of each of said frames; and

transmitting said predetermined number of said plurality of ATM cells over said wireless link by interleaving said header frame and said payload frame.

11. (original): A method according to claim 10, said step of transmitting further comprising:

interleaving by transmitting a third predetermined number of bytes from said payload frame for every byte transmitted from said header frame.

12. (original): A method according to claim 10, said step of transmitting further comprising:

adding a two byte synchronizing pattern to said header and payload frames.

13. (original): A method for storing information to be used by a receiving end of a wireless link relating to dynamic real time changes in encoding between an ATM frame to be transmitted over said wireless link and a subsequent ATM frame to be transmitted over said wireless link comprising:

encoding a plurality of ATM cells within an ATM cell stream, wherein said encoding step includes the steps of:

detecting idle/unassigned cells within said cell stream,

assembling an ATM frame having a header frame made up of headers of a first predetermined number of said plurality of ATM cells and a payload frame made up of payloads of said first predetermined number of said plurality of ATM cells,

placing up to a second predetermined number of the detected idle/unassigned cells in a selected portion of the payload frame, and

adding Payload Error Correction Code to those idle/unassigned cells which are placed in said selected portion of said payload frame; and

storing an idle/unassigned cell indicator in a first control byte in said header frame to be transmitted over said wireless link which indicates whether or not idle/unassigned cells have been placed at said selected portion of said payload frame; and

storing a count of the number of idle/unassigned cells contained in the payload frame in a second control byte within said header frame.

14. (original): A method for recording information to be used at a receiving end of an ATM wireless link relating to original positions of moved idle/unassigned cells in an ATM frame, comprising:

5

recording original positions of idle/unassigned cells as they occur in a cell stream made up of a predetermined number of ATM cells used to assemble said ATM frame having a header frame and a payload frame;

moving idle/unassigned cells to new positions at a selected portion of said ATM frame; and

overwriting header bytes of each moved idle/unassigned cell with the recorded original positions of each corresponding moved idle/unassigned cell.

15. - 17. (cancelled):

18. (original): A method for preserving overhead parity bits present in each of a plurality of received ATM frames which are to be transmitted over a wireless link comprising:

flagging a first nibble occurring in each of said plurality of ATM frames received;

assembling header and payload frames for transmission over said wireless link consisting of a predetermined number of ATM cells derived from said plurality of ATM frames;

recording a position of each said first flagged nibble encountered in each said predetermined number of ATM cells in control bytes contained in said header frame; and

storing said overhead parity bits occurring in each of said plurality of ATM frames in control bytes contained in said header frame.

19. - 38 (cancelled):

39. (amended):

39. (currently amended): ~~A method according to claim 38~~ A method for decoding interleaved and encoded data transmitted and received over a wireless link comprising:

6

deinterleaving said data and rearranging said data into a predetermined frame;

decoding said data according to a predetermined coding scheme;

detecting if any cells within a Header frame within said predetermined frame are uncorrectable; and

replacing detected uncorrectable cells with idle/unassigned cells,

wherein said step of rearranging said data further comprising:

checking control bytes contained with said Header frame to determine whether or not idle/unassigned cells were utilized for error correction in a Payload Frame within said predetermined frame;

reading a plurality of header bytes within said Header frame and forming a table of sequence numbers based upon said read header bytes;

reinserting idle/unassigned cells into said correct positions in said predetermined frame based upon said table of sequence numbers thereby restoring an order of cells occurring at a transmitting end of said wireless link.